

**REMARKS**

Claims 1-8, 10-13, 15, 17, 18, 20, 21 and 22 were pending. Claim 21 has been canceled herein. Thus, claims 1-8, 10-13, 15, 17, 18, 20 and 22 are now pending. The applicant respectfully requests reconsideration and allowance of this application in view of the above amendments and the following remarks.

Applicants first thank the Examiner for the thorough discussion provided in the final office action in response to the applicant's request for clarification of the issues.

Claims 1, 2, 15, and 17 stand rejected under 35 USC 102(b) as being allegedly anticipated by Johnson, U.S. Patent No. 5,430,346 (hereinafter "Johnson"). The applicants respectfully request that this rejection be withdrawn for the following reasons.

Applicant acknowledges that Johnson describes a second tip end of the ground electrode facing a tip end of the center electrode substantially along a longitudinal center line of the center electrode. Accordingly, claim 1 is amended herein to remove the feature that the ground electrode has a second tip end facing the one of the first tip end and an outer peripheral surface of a center electrode, substantially along a longitudinal center line of said center electrode, if the one includes the first tip end.

Applicants believe however that for reasons recited in previous responses, Johnson fails to disclose or suggest that the ground has a second tip end facing the one of the of the first tip end and an outer peripheral surface of a center electrode, substantially along a line extending perpendicular to the longitudinal center line of the center electrode, if the one includes the outer peripheral surface. For example, a close review of Johnson fails to produce a description or illustration of a ground electrode extending horizontally from a metal shell. All figures are directed toward a ground electrode which is vertically spaced using posts 38. Thus, even if the

ground electrode 12 extends horizontally, it does not extend horizontally from the metal shell 26 in a manner as claimed. Rather, at best, ground electrode 12 extends horizontally only from the posts 38. At best, as is clearly shown, for example, in Fig. 26 of Johnson, an outer peripheral surface (bottom surface 58) of a center electrode opposes a post 38 and thus does not oppose, in the manner claimed, a second tip of a ground electrode, does not define a spark gap, and does not face substantially along a line extending perpendicular to the longitudinal center line of the center electrode.

It is respectfully requested therefore that the rejection of claim 1 be reconsidered and withdrawn.

Claims 2, 15, and 17 by virtue of depending from claim 1 are allowable for at least the reasons set forth herein above. It is respectfully requested that the rejection of claims 2, 15, and 17 be reconsidered and withdrawn.

Claim 3 stands rejected under 35 U.S.C. 103 (a) as being allegedly unpatentable over Johnson. By virtue of depending from claim 1, claim 3 is allowable for at least the reasons set forth herein above. The rejection of claim 3 should therefore be withdrawn.

Claims 4, 5, stand rejected under 35 U.S.C. 103 (a) as being allegedly unpatentable over Johnson in view of Takafumi et al JP 63-266046. The rejection is respectfully traversed.

By virtue of depending from claim 1, claims 4 and 5 are allowable for at least the reasons set forth herein above. The rejection of claims 4, and 5 should therefore be withdrawn.

Claim 7, 8, 10, 13, 18, 20 and 21 stand rejected under 35 U.S.C. 103 (a) as being allegedly unpatentable over Johnson in view of Franks U.S. Patent No. 3,958,144. By virtue of depending from claim 1, claim 7, 8, 10, 13, 18, 20 and 21 are allowable for at least the reasons set forth herein above. The rejection of claims 8, 10, 13, 18, 20 and 21 should therefore be withdrawn.

Claims 1, 6 and 22 stand rejected under 35 U.S.C. 103 (a) as being allegedly unpatentable over Pfeil, U.S. Patent No. 2,406,966 in view of Johnson. The rejection is respectfully traversed.

With regard to claim 1, the claimed structure is not recited in Pfeil and thus in the applied art combination. In particular, Pfeil, as admitted by the Examiner, fail to teach or suggest, for example, laser fused welding of the ground electrode and instead teaches the contrary practice of spot welding. The Examiner asserts that Johnson teaches laser fused welding at col. 4, lines 42-50. Applicant notes however that in the cited section, only unspecified laser welding is mentioned along with other conventional methods.

It is known that spot or resistance welding requires a welding projection, while laser fused welding requires no such projection. The plug of Pfeil is adapted for spot welding and because of the specific requirement for a 96% platinum 4% tungsten alloy to control local recrystallization and maintain a fibrous microstructure around the weld, the plug of Pfeil could not simply be subjected to the unspecified laser welding of Johnson, who prescribes a 90% nickel alloy, or an unspecified platinum alloy for the electrode material. Subjecting the plug of Pfeil to laser welding could easily render the plug inoperable by disrupting the control of the fibrous microstructure.

For the reasons set forth above with regard to Johnson, the applied art combination fails to teach or suggest that the ground has a second tip end facing the one of the of the first tip end and an outer peripheral surface of a center electrode, substantially along a line extending perpendicular to the longitudinal center line of the center electrode, if the one includes the outer peripheral surface of the center electrode. Pfeil fails to account for this deficiency.

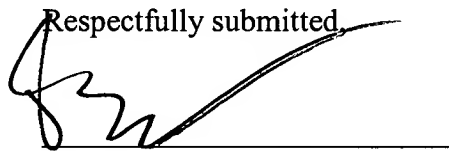
Accordingly the applied art combination fails to teach or suggest all the claimed features as required. It is respectfully requested therefore that the rejection of claim 1 be reconsidered and withdrawn.

Claims 6 and 22, by virtue of depending from claim 1, is believed allowable for at least the reasons set forth hereinabove with regard to claim 1. It is respectfully requested that the rejection of claim 6 and 22 be reconsidered and withdrawn.

In view of the foregoing, the applicants respectfully submit that this application is in condition for allowance. A timely notice to that effect is respectfully requested. If questions relating to patentability remain, the examiner is invited to contact the undersigned by telephone.

Please charge any unforeseen fees that may be due to Deposit Account No. 50-1147.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Robert L. Scott, II', is written over a horizontal line.

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